"Preventing Teen Pregnancy: Recommendations for a Comprehensive School Based Intervention"

by

Diane Davis

March 29th 2006

A Master's paper submitted to the faculty of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Master of Public Health in the School of Public Health, Public Health Leadership Program.

Approved by:

Michelle Lyn, MBA, MHA

William Williamson

Second Reader: William Williamson, MPH

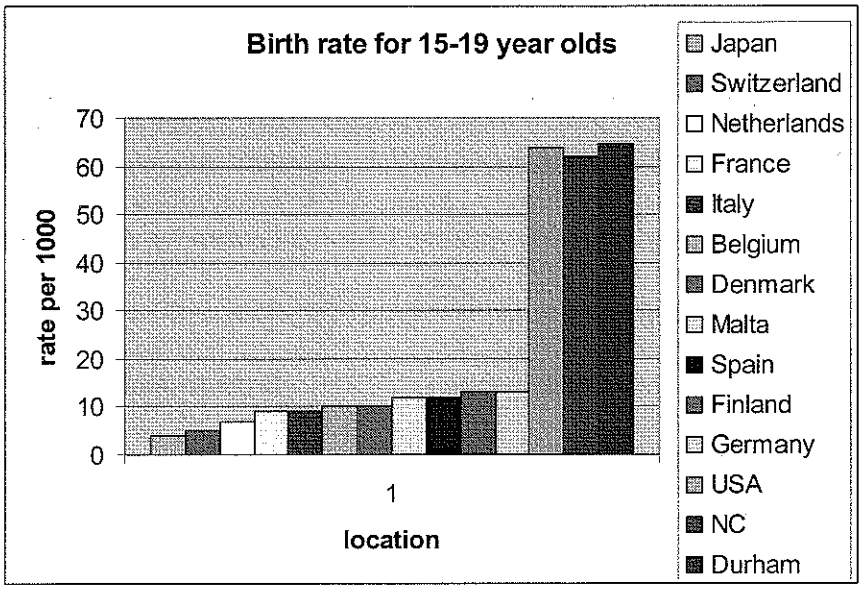
Abstract

Teen pregnancy is a prevalent problem in the US as well as locally. The United States has the highest rate of teen pregnancy in the developed world, and rates in our county are higher than both state and national rates. Teen pregnancy is costly for the teen, her child, and society. A review of international and national trends and interventions reveals that there are some proven methods which can decrease teen pregnancy by delaying onset of intercourse and increasing the use of condoms and contraception. Evidence shows that a well structured Comprehensive Sexual Education curriculum coupled with additional support for at risk teens; a program tailored to the local population but based on proven methods, is the most successful approach. Currently, the public school system in Durham County has no organized approach to this serious problem. Sexual education in our school systems is fractured and taught by teachers with varying levels of education and experience with no standardized training or curriculum. A revision of the current policies to include a standardized curriculum taught by well trained teachers and combined with additional support for at risk teens would provide our teens with the ability to make responsible sexual decisions, reducing teen pregnancy and its associated costs.

Background

The United States of America arguably has the best educational opportunities and medical care available world wide, yet we continue to have areas in which we are woefully inadequate. The US has the highest rate of teen pregnancy in the developed world with a rate of 83.5/1000 pregnancies (Singh and Darroch, 2000) and 64/1000 births in teens aged 15-19. Nationally, at least 75% of young women have sex and 40% get pregnant before the age of 20 (Best Practices). Compare this with other major developed countries, where birth rates are as low as 4/1000 (Japan) to 13 (Germany).

Figure 1



Local figures are no better - birth rates (actual live births only, does not include abortion or miscarriage) of teens aged 15-19 in NC in 2004 was 62.4/1000 and 64.5/1000 in Durham county; the rate was 97.3/1000 among 18-19 year olds state wide (NC vital statistics). When looking at trends for pregnancy outcomes in this age group, (Guttmacher 2004) it is evident that an additional 50% of girls either abort or miscarry, bringing the estimated pregnancy rate up to over 90/1000. This clearly has major effects

on both the lives of the teens and societal cost. Forty percent of young women who have children before the age of 20 do not finish high school or receive a GED by age 30, and frequently their children are raised in poverty with lower academic achievement, more behavioral and emotional problems and a greater likelihood of becoming teen parents themselves (Guttmacher, FIB), thus continuing this cycle of oppression. Those who do not become pregnant have higher rates of sexually transmitted infections, which can lead to significant morbidity in such areas as infertility and, in the case of diseases such as HIV, even death.

The CDC noted that six categories of behavior, one of which is sexually transmitted infections (STIs) and unintended pregnancies, account for 70% of all adolescent morbidity and mortality (CDC as quoted in IOM, 1997). It is the goal of Healthy People 2010 to decrease teen (15-17 year of age) pregnancy to a rate of 43/1000, and while pregnancy rates are declining, we are far from this goal. It is the responsibility of the community to give all of its citizens equal access to the opportunities to make healthful choices (Milio 1989). We are clearly failing in this responsibility. What are we doing wrong? Why are our teens engaging in unsafe sex, exposing themselves to disease and becoming pregnant, and what can we do to educate and empower them to make more responsible decisions?

There is an obvious need for improved access to information and services for our teens. Teens want more information and education; according to recent survey of secondary school students, almost half of them wanted, yet lacked, accurate information on contraception, STIs, HIV, handling the pressure to have sex, and dealing with rape or sexual assault. (Kaiser Family Foundation website). Parents also want their children to

have access to this information: a national poll in the United States found that 89% of public school parents feel that public high schools should include education about family life and reproductive health in their curriculum (Rose & Gallup, 1998). In a similar poll, 90% of parents believed it was very or somewhat important that sex education should be taught in schools, and only 15% wanted an abstinence only form of sex education. Parents overwhelmingly wanted a complete educational experience including information on sexually transmitted infections (99%) how to use and where to get contraceptives (86%). (Dailard 2002). In "Schools and Health: Our Nations Investment", the Institute of Medicine (IOM) reports that school health education is a cost-effective method of education, but despite this there is a large gap between what health educators believe should be taught, and what is actually occurring (IOM 1997). This paper will review the current status of education and support of teens regarding healthy sexual decision making, evidence of the types of programs which are successful, and suggest a new direction for the benefit of the future of our teens.

Understanding Sexual Decision making

Understanding why teens are sexually active and why they do or do not use effective contraception is a difficult undertaking. According to Douglas Kirby in the National Campaign to Prevent Teen Pregnancy, there are over 100 antecedents or risk factors which increased the chances of adolescent sexual risk-taking and pregnancy (Kirby, 2001), which range from sexual beliefs, attitudes and skills to economic and community disadvantage to family structure and family, peer and partner attitudes. Clearly, many of these factors are not controllable by policy or mandate, and even among those that are, no single program could address all of these issues. Changing the overall

national climate on this issue will take years, and we cannot change the economic status of our teens or their family structure. What we can affect in a timely fashion through modifying existing structures are the educational opportunities and skill building abilities of our teens; using current knowledge of successful interventions, we can improve the educational system we provide to our teens in their school environment.

Everyone agrees that this is a problem, but there is no consensus on a solution. Typically, arguments surround the issue of sexual education – should we teach abstinence until marriage (AUM) only, or Comprehensive Sexual Education (CSE)? This debate implies that the sole reason that adolescents make choices regarding sexual activity is their information/education regarding sex (or lack there-of). This dramatically oversimplifies the issue. When we simplify the issue to AUM vs. CSE, we take the individual making the decision – the teen - out of the equation. We are assuming that the correct information will lead to the correct choice. Multiple models of behavior show that this is not the case. Further, this implies that the main reason that teens chose to have (or not to have) sex are reasons related to sexual knowledge and beliefs. This, also, is untrue. Kirby discussed over 100 antecedents to a teen's decision to have sex, and many have nothing to do with sex itself. Individuals make decisions based on multiple factors including social norms, peer and parental influence, perceptions of danger or likelihood of desired outcome, just to name a few. Reducing sex education to a couple of hours of isolated learning about rates of failure (or success) of various methods, without context or skill building, is doomed to failure. Sex education needs to be a part of Life Education – teaching the ability to make good decisions, and the skills to follow through with them, exposing the teen to realistic alternatives and ways of life, and allowing them to

determine what is best for them. In order to truly make an effect, we need to take everything we know about programs and successes, and re-format the curriculum to fit the target audience – the teen. We need to look not only at **what** we teach, but also who is teaching it, and how it is being taught, and what other support systems/resources we are able to offer.

International perspective

The rate of pregnancy in other developed countries is significantly lower than ours, despite the fact that the age of onset of sexual activity is essentially the same in most of these industrialized countries (Guttmacher, FIB). Looking at other countries social, political and educational environments, there are many likely reasons for the lower birth rates. In most of these countries, research is the basis for public policies regarding these issues, and political and religious interest groups have little influence on public health policy (Feijoo 2001). Concurrently, other governments support massive, consistent, long-term public education campaigns. Youth have convenient access to free or low-cost contraception through national health insurance. Sexuality education is not necessarily a separate curriculum and may be integrated across school subjects and at all grade levels. Educators provide accurate and complete information in response to students' questions. Contrast this with the US where many policy decisions are made based on pressure from political and religious interest groups, where there is no significant education campaign, and where sexuality education is highly controversial, controlled with mandates regarding what can be taught, and is taught by teachers with varying levels of education and experience.

Sexual Education in the school system

In a review/discussion of sex education in the school systems, it is important to be clear on what we are trying to accomplish. What is the goal of sex ed? The goals should be to improve the lives of our teens and to allow them to have the opportunity for a better future. We need to help them learn to make responsible decisions regarding their bodies, hopefully delaying the onset of sexual activity and to use effective protection and contraception if they do become sexually active, thereby reducing the number of unplanned teen pregnancies and sexually transmitted infections (STIs). Currently, there are two main categories of sex education: Abstinence-Until-Marriage and Comprehensive Sex Education.

There has been much debate about what should be taught in our school systems. The 1996 title V amendment has changed the curriculum in most school systems to an "Abstinence only until marriage" (AUM) curriculum if the school wants to benefit from additional federal funding. (Title V Maternal and child health services block grant, SEC. 510b. *[42 U.S.C. 710])* (See Table 1 for definition of Abstinence Education). The theory was that teens should be educated on "expected behavior" and that information on contraceptive options and safe sex should not be included as this would diminish the overall message of abstinence. Multiple programs were developed and implemented. This grant was refunded in 2005 despite the fact that no studies had yet been done on efficacy of these programs.

It has since been shown that the abstinence only programs are not only ineffective, but may in fact be detrimental. The supporters of Abstinence Only continue to defend the programs, but primarily rely on "moral values" for support of the

Table 1
Definition of "Abstinence Education" (Title V Sec 510 42 U.S.C 710)

For the purposes of this section, the term "abstinence education" means an educational or motivational program which-

(A) has as its exclusive purpose, teaching the social, psychological, and health gains to be realized by abstaining from sexual activity;
(B) teaches abstinence from sexual activity outside marriage as the expected standard for all school age children;
(C) teaches that abstinence from sexual activity is the only certain way to avoid out-of-wedlock pregnancy, sexually transmitted diseases, and other associated health problems;
(D) teaches that a mutually faithful monogamous relationship in context of marriage is the expected standard of human sexual activity;
(E) teaches that sexual activity outside of the context of marriage is likely to have harmful psychological and physical effects;
(F) teaches that bearing children out-of-wedlock is likely to have harmful consequences for the child, the child's parents, and society;
(G) teaches young people how to reject sexual advances and how alcohol and drug use increases vulnerability to sexual advances; and
(H) teaches the importance of attaining self-sufficiency before engaging in sexual activity.

programming. They have been unable to produce reproducible, credible evidence to show success in behavior changes or outcomes. Examples of supporters' statements:

- North Carolina Policy Council Findings published a "review" on Comprehensive Sex Education but rather than discussing the effect/changes on behaviors of teens, they focused on what the curriculum included (such as tolerance for homosexuality and promotion of use of contraceptives and condoms), which was considered to be immoral; Abstinence Only was concluded to be superior because, "AUM education provides young people with objective sexual values, and helps them develop a truly positive view of sexuality that links sex to love, intimacy, and commitment within marriage" (Elhage, 2005). – it is true that AUM

provides "sexual values", but they are certainly not objective. Further, the review was unable to show any studies to prove AUM is effective in changing behavior or outcome.

- The North Carolina Republican Party Platform states: "Republicans oppose mandatory sex education in public schools and believe sex education should not be included in any public school program without obtaining prior approval from parents or guardians. Where sex education is included, we support teaching abstinence until marriage as required by state law, and as the expected norm for acceptable sexual behavior. National studies have shown that the majority of Americans agree with this approach. The practice of abstinence until marriage is the most effective way to prevent teenage pregnancies, absentee fathers, abortion, and sexually transmitted diseases. It is also the most effective way to create healthy relationships and healthy self-esteem among young people". (NC Republican Party Platform, 2004) Again, a blanket statement based on moral judgment, with no objective supportive data.
- One study by the Heritage Foundation (Rector, 2002) did claim to have multiple "scientific studies" which supported AUM curriculum, but virtually all had problems. As noted by Kirby (Kirby, 2002) 9 out of the 10 studies failed to show "credible evidence" based on scientific standards that they changed behaviors (reduced pregnancy or delayed onset of sexual behavior). It was also noted that these studies were not representative of the great majority of studies on AUM, and were picked out of many studies because of their potentially positive outcomes. Examples of the studies referenced by Rector:

- Operation Keepsake reached "borderline significance", but was short-term (5 months) and a later evaluation showed a decrease in intent to use condoms and unchanged age of initiation of sexual intercourse (Borawski, 2005)
- The discussion of "Virginity Pledge" programs were effective in very limited circumstances, heavily dependant on participants age, number of participants and percentage of participants who pledged. Again, those who did eventually have sex were less likely to use contraception. (Bearman, 2001). Also, there is likelihood that there was some self-selection bias: those who took the pledge likely had pre-existing opinions and intentions regarding when to initiate sexual activity.

Multiple scientifically based studies have shown problems and weakness with AUM programs. Some examples include:

- The Society for Adolescent Medicine published a review of Abstinence only education in The Journal for Adolescent Health, and concluded "We believe that abstinence-only education programs, as defined by federal funding requirements, are morally problematic, by withholding information and promoting questionable and inaccurate opinions. Abstinence-only programs threaten fundamental human rights to health, information, and life." (Santelli et all 2006)
- Advocates for Youth performed a review of evaluation results from the ten states which performed evaluations on Abstinence Only programs and found there was no significant long lasting positive impact – there were no long-term positive impacts on participants' attitudes towards abstinence, no long term impact on

intentions to abstain until marriage, and no change in sexual behavior (Hauser 2006).

- In "Emerging Answers" Kirby noted that none of the evaluated programs showed an overall positive effect on sexual behavior (Kirby, 2006)
- Many programs actually had incorrect data; in a Committee on Government Reform Report in Dec 2004, 80% of Abstinence-only curriculums were noted to have factual errors, ranging from reporting inaccurate failure rates of contraception to exaggerated risks of abortion to stereotypically representing differences between girls and boys (Waxman 2004).
- Many studies found that not only did the programs not delay onset of sexual activity, but that there was a **lower** use of condoms in participants when they did become sexually active.

In contrast to this, evaluation of comprehensive sexual education classes, which stress abstinence as the most effective method to prevent pregnancy and STIs but also teach about contraception and condom use, have multiple studies which have shown success in behavior changes. Support of this type of education is broad, with virtually every major accredited national and international organization concurring that a comprehensive education program which gives accurate factual data is the ideal type of program. Examples of statements in support of CSE:

- "Although sexual abstinence is a desirable objective, programs must include instruction in safer sex behavior, including condom use. The effectiveness of these programs is supported by strong scientific evidence." (NIH 1997)

- "...the effective programs identified to date provide information about safer sex, condoms, and contraceptives, in addition to encouraging abstinence." (Office of National AIDS Policy, September 2000)
- The Centers for Disease Control and Prevention in the United States identified several school-based interventions that effectively reduced sexual risk behaviors that contribute to unintended pregnancies and STI/HIV infections. All would be considered CSE by current definition (CDC, 2000).
- Kirby identified five Sex Education/HIV prevention programs which either delayed sex or increased condom or other contraception use significantly. These same studies were identified by the CDC as having "strong evidence of success" This included the "Reducing the Risk" program which has had two other independent studies confirming a delay in the onset of intercourse and an increase in use of condoms. (Kirby, 2001)
- Research has repeatedly shown that reproductive health education does not lead to earlier or increased sexual activity among young people and can in fact reduce sexual risk taking behavior. "A study which analyzed 1000 reports found no evidence that the provision of sex education, including the provision of contraceptive services, encourages the initiation of sexual activity. On the contrary, in some cases, sex education delayed the initiation of sexual intercourse, decreased sexual activity, and increased the adoption of safer sexual practices among sexually active young people."(WHO review,)

While this evidence is promising, it is important to note that there are specific characteristics which seem to be essential in the success of these programs. Kirby

noted 10 characteristics, including length of program, training of teachers, and types of information and skills provided in the classes (see Table 2). When looking at programs, it is essential to not only look at what we are teaching, but also how we are teaching it

Table 2
10 Characteristics of Effective Sex and HIV Education Programs
(Kirby, 2001)

The curricula of the most effective sex and HIV education programs share ten common characteristics. These programs:

1. Focus on reducing one or more sexual behaviors that lead to unintended pregnancy or HIV/STD infection.

2. Are based on theoretical approaches that have been demonstrated to influence other health-related behavior and identify specific important sexual antecedents to be targeted.

3. Deliver and consistently reinforce a clear message about abstaining from sexual activity and/or using condoms or other forms of contraception. This appears to be one of the most important characteristics that distinguishes effective from ineffective programs.

4. Provide basic, accurate information about the risks of teen sexual activity and about ways to avoid intercourse or use methods of protection against pregnancy and STDs.

5. Include activities that address social pressures that influence sexual behavior.

6. Provide examples of and practice with communication, negotiation, and refusal skills.

7. Employ teaching methods designed to involve participants and have them personalize the information.

8. Incorporate behavioral goals, teaching methods, and materials that are appropriate to the age, sexual experience, and culture of the students.

9. Last a sufficient length of time (i.e., more than a few hours).

10. Select teachers or peer leaders who believe in the program and then provide them with adequate training.

Generally speaking, short-term curricula — whether abstinence only or sexuality education programs — do not have measurable impact on the behavior of teens.

Non-sexual antecedents

As discussed above, there are multiple antecedents to sexual activity, not all of which are sexual. There is a significantly increased risk of sexual activity in teens who

have less attachment to school, family and peers, and who come from disadvantaged families and communities (Kirby, 2001). Service learning programs have been shown to not only increase a teen's likelihood to finish school, but also to decrease sexual activity and pregnancy. An example of this type of program is TOPs (Teen Outreach Program). This program combines a once weekly, 30-50 min school-based class with a once weekly hour long volunteer activity in a local community, such as a local Head Start, other school, nursing home or animal shelter. TOPs participants averaged an 11% lower course failure rate, a 14% lower school suspension rate, a 33% lower teen pregnancy rate, and a 60% lower school dropout rate than among comparison students. The typical TOPs programs' classroom component includes some sexual education, but modified versions which removed all of the sexual education class discussion had similar rates of success. (Cornerstone 2005).

A Success Story – California

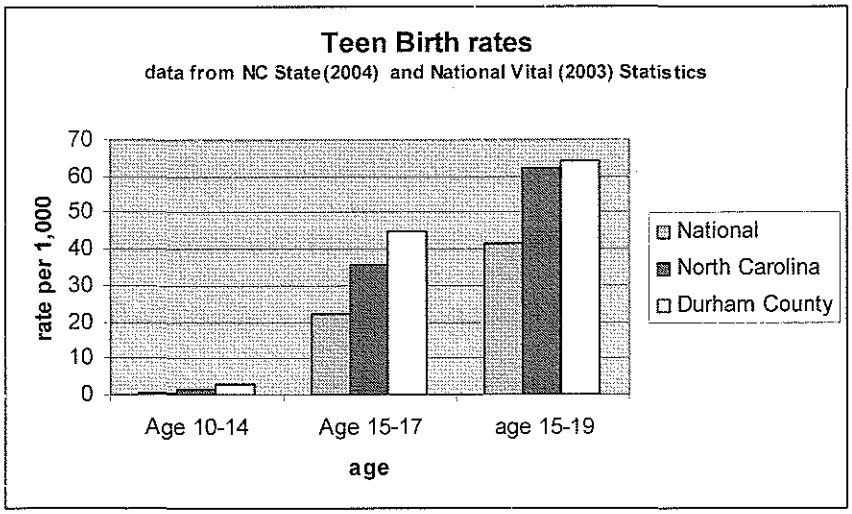
In 1991, California had one of the highest teen pregnancy rates at 75/1000 teens aged 15-19. They implemented an Abstinence only curriculum statewide in the early 1990s, but terminated it in 1996 when it became apparent that it was not effective (Kirby, 2001). At that point, the state began a comprehensive, school based sexual education program, passing a law which stated that schools that teach sex education must include medically accurate information about contraception, including condoms. According to the SHHPS study, California currently requires education on pregnancy prevention, sexuality, and STI prevention. The "Health Framework for California Public Schools" includes a detailed set of grade level expectations and content information, including discussions on sexuality. California also implemented Project "TEACH", a program

designed to improve teachers training in health education during their pre-service education. By 2002, the rate had dropped to 41.1/1000, a decrease of 44%, the greatest decrease of any state in the Nation (California Office of Family Planning).

A local look

While this issue clearly has local, national and international importance, and can be highly visible and controversial, it seems that, at least locally, the predominant action is no action. This is particularly upsetting as the scope of this issue is severe in Durham County. Durham's pregnancy rate for 10-14 year olds is 2.9/1000, the highest in the sate and almost double the state average of 1.6/1000 (Adolescent Pregnancy Prevention Coalition of North Carolina 2003). The birth rate of 15-18 year olds in Durham County in 2004 was 64.2/1000, higher than the statewide rate of 62.4/1000, and the birth rate of 15-17 year olds was 44.7/1000, as compared to a rate of 35.9/1000 state wide in this age group. (NC vital statistics). Nationally, in 2003 birth rates for 10-14 year olds were 0.6/1000, ages 15-17 was 22.4/1000 and the overall rate for ages 15-19 was 41.6/1000 (National Vital Statistics, 2005). (See Figure 2)

Figure 2



Similarly, STI rates in Durham are also higher than the state and national average In June of 2005, the NC Partnership for a Healthy Durham identified limited comprehensive sexuality education in schools and community and lack of accessible reproductive health services as two of the major reasons for these rates (Partnership for a Healthy Durham, 2005).

There are eight middle schools (grades 6-8), two secondary schools (grades 6-12) and seven high schools (grades 9-12) in Durham. The schools vary in demographics, including race and income level, and have widely variable rates of graduation, teen pregnancy, and other measures of success. Sexuality education is a part of the Healthful Living curriculum in the NC Standard course of study. The Healthful Living curriculum occurs twice, students participate in health classes in the 8th and 10th grade. This curriculum includes many issues and is split between PE and Health. There are 12 competency goals for the grade 6-12 curriculum, each with multiple objectives; Sexual Education is addressed in Competency Goals 3 (see Tables 3 and 4, adapted from the NC Standard Course of Study). There are no specific competency goals related to Sexual Education at any grade level lower than middle school.

Currently, Durham County lacks a unified, consistent approach to teaching Sexual Education. The county has an exception to the abstinence only rule; they are allowed to teach CSE if the curriculum is made available prior to classes. There is a basic curriculum but they do not follow a specific program; individual schools design the actual class formats individually. The Healthful Living curriculum combines PE and Health for the academic year. In 8th grade, students have one semester of PE and one semester of Health. In high school, with the current block scheduling, students

Table 3 8th grade curriculum Competency Goal 3 - The learner will interpret health risks for self and others and corresponding protection measures.
Objectives
3.01 Perform the Heimlich maneuver and demonstrate basic CPR techniques and procedures on a mannequin, and pass a Red Cross or Heart Association approved test of CPR skills.
3.02* Understand that a mutually faithful monogamous heterosexual relationship in the context of marriage is the best lifelong means of avoiding sexually transmitted diseases, including HIV/AIDS.
3.03* Explain methods of contraception, their effectiveness and failure rates (some studies indicate condom use failure rates ranging from 2% to 30%), and the risks associated with different methods of contraception, as a means of preventing sexually transmitted diseases including HIV/AIDS.
3.04* Demonstrate skills and strategies for remaining or becoming abstinent from sexual intercourse, and avoiding sexually transmitted diseases including HIV/AIDS.
3.05 Project potential personal health consequences of global environmental problems.
3.06 Select personal behavior goals and strategies contributing to environmental improvement.
3.07 Evaluate accuracy and significance of media reports of health and medical research.
3.08 Communicate with health care providers about personal health status and concerns.
3.09 Explain how certain fads affect health, e.g., body piercing, tattooing, artificial fingernails.

Table 4 10th grade curriculum Competency Goal 3 - The learner will interpret health risks for self and others and corresponding protection measures. (Grade 9-12)
Objectives
3.01 Interpret the importance of various health risks.
3.02 Explain activities taken for disaster preparedness.
3.03 Prioritize own health risks and construct a model health risk behavior self-management plan.
3.04 Identify risk behavior to manage.
3.05 Explain the importance of early detection, including medical examination and self-examination.
3.06 Assess behaviors and decisions as to their likelihood of resulting in infant morbidity and mortality.
3.07* Understand that a mutually faithful monogamous heterosexual relationship in the context of marriage is the best lifelong means of avoiding sexually transmitted diseases, including HIV/AIDS.
3.08* Refine skills and strategies for remaining or becoming abstinent from sexual intercourse, and avoiding sexually transmitted diseases, including HIV/AIDS.
3.09* Understand causes, consequences, and prevention of major health risk behaviors for own age group, including the transmission of HIV/AIDS.

alternate days between PE and health throughout the tenth grade school year. In the average school, the entire Sexual Education component of the curriculum is covered in a 7-10 day program.

In general, the same teachers teach PE and Health. These teachers are required to have undergraduate or graduate education in PE as well as current certification in PE, but there is no similar requirement for Health, nor are teachers required to participate in any specific training programs for any health based curriculum, including Sexual Education (SHHPS report, 2000). Therefore, the interest, ability and skills of these teachers in the health area vary. Some may be very interested and innovative teachers in both fields, others may be uncomfortable teaching the Sexual Education issues, but are required to because of the way the system works. Both of the teachers that I spoke with agreed that the quality of teaching varies based on the teachers experience and comfort level with the material, and one mentioned that she has noted a significant difference in the quality of the health program in both Middle and High School when the teacher is exclusively a Health teacher. (Personal conversation, 3/2006). This opinion is supported; it has been noted by the CDC that most teachers of health education in this country have not majored in this field, and that there is not an "overwhelming demand" for development or training in this area, perhaps due to lack of awareness of the importance and complexities of the issue, or perhaps simply because the teachers with majors in other fields are not interested in improving these skills (IOM, 1997). As one teacher added, the knowledge base of the students varies dramatically depending on where they are coming from (public or private middle schools, home schooling) and she frequently spends the first 1-2

classes on basic anatomy and learning the correct terminology rather than using slang. (Personal conversation, March 1 2006).

In addition to the standard curriculum, the two high schools which would be considered "high risk" due to demographic factors (Southern and Hillside) also have school based clinics. These clinics provide health care to all enrolled students for a variety of health issues including diagnosis and treatment of STIs and counseling regarding contraception. Due to NC state laws, they are not permitted to dispense condoms or provide contraception on site. An innovative, new program, ACCESS (Adolescent Centered Care, Education, and Support Services) is currently being implemented in these same two schools. This program will combine prenatal services with supportive mental health services to the pregnant teens. The mental health aspects include voluntary enrollment in the Healthy Families program for pregnant/parenting teens, and the beginnings of SPARCS (Structured Psychotherapy for Adolescents Responding to Chronic Stress) groups on-site for both pregnant teens and teens considered to be at risk for pregnancy or STIs. This program provides intense group formatted counseling and teaches skills aimed at allowing teens to self-monitor and make appropriate, informed decisions regarding their lives and bodies. Currently, there are two SPARCS groups running at Southern, each with approximately 7 group members. Hillside hopes to begin the classes this summer.

Recommendations for Change

In order to truly engender change, we need a comprehensive, interdisciplinary program which will provide the teens with information/education, empowerment, alternatives, and hope. While we cannot change the environment in which these adolescents live as far as national opinion and income, and family support, we can provide a level of community support in what is arguably the teen's strongest community – his or her school. As noted by Kirby (Kirby, 2001) the best way to implement new programs is to either use "with fidelity" programs known to be successful, or to adapt them as closely as possible. In accordance with CDC recommendations, educational programs should be focused towards the known risky behaviors, and should begin intensively in the late elementary school and middle/junior high school grades (CDC as quoted in IOM, 1997), a crucial stage when children are still shaping attitudes and beliefs. In looking at what is known to be successful, there are clearly areas for improvement in the Durham County system. Suggestions for the adaptation of the Healthy Living curriculum include:

- Standardizing the curriculum across all schools.
    - Require basic anatomy and physiology to be taught in the biology classes starting in grade school so that all students have that basic information before beginning the healthful living curriculum.
    - Standardize the actual sex education component of the program, with specific class curriculum which would be based on a nationally recognized program such as "Reducing the Risk". Ensure that the program incorporates necessary components including those discussed by Kirby.

- Extend the length of time spent on this component of the class. It has been shown that to be effective, classes need to be more than just a few hours long (Kirby, 2001, IOM 1997). While clearly the school schedule is full with important issues, and we are unable to devote an entire semester to this one component of health, it does merit at least a minimum of 10-12 hours, or 2-3 weeks at the 8th grade level, with the 10th grade class reinforcing and building on skills learned previously.
- Include issues regarding sexuality in other classes when appropriate, and provide brief "booster" classes in the years that do not have a designated health class.

- Require training and certification of health teachers. A successful program depends on the knowledge and experience of the teacher; teachers who are uncomfortable teaching sexuality are not going to be successful. (Kirby, 2003). The IOM also noted that programs run by teachers who receive training have more positive effects (Connel and Ross as quoted in IOM 1997). Teachers should be required to attend training and maintain proof of competencies the same as they do in any other teaching field. Consider having designated Health teachers where feasible.
- Offer a more comprehensive program for at risk teens. Expand the SPARCs programs in Hillside and Southern, and begin programs in the other schools. Students would be referred into the program by teachers, or could self-refer. Offer health electives for students to enroll in voluntarily if they desire more information.

- Expand the services of the School Based Clinics at Southern and Hillside to offer further contraceptive counseling and link students to external clinics where they can affordably access contraception. Challenge the law prohibiting providing contraception on school grounds, so that one day the school based clinics can offer onsite contraceptive management, including condoms and depo injections.
- Implement a service/volunteer program in all schools as a required part of the curriculum, based on the TOPS curriculum. This could be integrated into another aspect of studies, such as social studies, and offered during a different academic year than the health classes.

Conclusion

Teen pregnancy is a serious problem locally as well as nationally. The implementation of a structured, consistent curriculum in the public schools which mirrors successful programs elsewhere will help us to empower our teens to become responsible, successful adults.

References

Adolescent Pregnancy Prevention Coalition of North Carolina
http:/www.appcnc.org/images/stats2003.pdf

Best practices in Adoescent Pregnancy Prevention (BPAPP) Research to Practice Users' Guide. Cicatelli Associae, http://www.cicatelli.org/BPAPP

Borawski, Elaine PhD; Erika S. Trapl, MS; Loren D. Lovegreen, MA, Natalie Colabianchi, PhD, Tonya Block, BA :effectiveness of Abstinence-only Intervention in Middle School Teens"

Centers for Disease Control (CDC) (2000). Programs That Work.
Http://www.cdc.gov/nccdphp/dash/rtc/index.htm

Consensus Development Conference Statement. Rockville, MD: The Institutes, 1997.

Cornerstone consulting group, The Teen Outreach Program (TOP), Jul 11, 2005, 2:14pm

Dailard C. Abstinence promotion and teen family planning "the misguided drive for equal funding". The Guttmacher Report on Public Policy 2002.

Doniger, Andrew S. "Impact evaluation of the "Not Me Not Now" Absitnence-Oriented Adolescent pregnancy Prevention Communicaitons Program, Monroe Count, New Your" Journal of Health Communications, Vol 6 2001.

El Hage, Alysse M. Hazardous to Teen Health The Reality of Comprehensive Sex Education, NC Family Policy Council

Feijoo, Ammie N. "Adolescent Sexual Health in Europe and the US - Why the Difference?" 2nd Edition, October, 2001, Advocates for Youth

Guttmacher institute: U.S. Teenage Pregnancy Statistics With Comparative Statistics For Women Aged 20-24, February 19, 2004

Guttmacher institutes Facts in Brief: Teenagers' Sexual and Reproductive Health: Developed Countrieshttp://www.agi-usa.org/pubs/fb_teens.html

Hauser, Debra. "Five years of Abstinence-Only –Until Marriage Education: Assessing the Impact." Advocates for Youth, 2006.

Healthy Framework for California Public Schools
http://www.cde.ca.gov/re/pn/fd/documents/health-framework-2003.pdf

IOM, Schools and Health, Our Nations Investment, National Acadamies Press 1997

Kaiser Family Foundation, Kaiser Family Foundation National Survey of Scondary School Students about Sexual Health Issues and Services: The Facts and More (http://kff.org)

Kirby, Douglas. "Do Abstinence-Only Programs Delay the Initiation of Sex Among Young People and Reduce Teen Pregnancy?" October 2002, National Campaign to Prevent Teen Pregnancy

Kirby, Douglass. "Emerging Answers: Research Findings on Programs to Reduce Teen Pregnancy." Washington DC: National Campaign to Prevent Teen Pregnancy 2001.

Milio, Nancy: Promoting Health Through Public Policy" Canadian Public Health Association, Ottawa 1989.

National Institutes of Health.

National Vital Statistics Reports, CDC, June 2005
http://www.cdc.gov/nchs/data/nvsr/nvsr54/nvsr54_02.pdf

North Carolina Republican Party Platform, 2004 FINAL VERSION
http://www.ncgop.org/reference/platform.html

Office of National AIDS Policy. Youth and HIV/AIDS 2000: A New American Agenda. Washington, DC: The White House, September 2000.

Partnership for a Healthy Durham, Results based Accountability Report, June 10 2005)
http://www.ci.durham.nc.us/rba/healthy_group.pdf

Rose, L.C., & Gallup, A.M. (1998). The 30th Annual Phi Delta Kappa/Gallup Poll of the Publics Attitudes Toward the Public Schools, Princeton, NJ: The Gallup Organization. As cited in Advocates for Youth, 1999.

Santelli, John, M.D., M.P.H.a,*,et al Abstinence and abstinence-only education: A review of U.S. policies and programs. Journal of adolescent Health, 2006

SHPPS report; School Health Programs Report card 2000
http://www.cdc.gov/HealthyYouth/shpps/report_cards/pdf/northcarolina.pdf

Singh Susheela, Darroch Jacqueline E.: Adolescent Pregnancy and Childbearing: Levels and Trends in Developed Countries. Family Planning Perspectives Volume 32, Number 1, Jan/Feb 2000

State of the County Report, Partnership for a Healthy Durham, Durham County Health Department.

Waxman report; The content of Federally Funded Abstinence-Only Education Programs, United State House of Representative Committee on Government Reform-Minroy Staff Special Investigations Division, prepared for Rep Henry Waxman, Dec 2004

Who review, "FAMILY LIFE, REPRODUCTIVE HEALTH, AND POPULATION EDUCATION: KEY ELEMENTS OF A HEALTH-PROMOTING SCHOOL", Information series on school health, Document 8.